

REMARKS

Claims 32 and 33 are amended, claim 29 is canceled, claims 38 and 39 are withdrawn and claim 40 is added herein. Claims 3, 9, 28-37 and 40 will be pending for consideration upon entry of this amendment.

The following remarks are responsive to the final Office action dated May 10, 2004.

I. Response to Election/Restriction

While applicants disagree with the Office's position set forth in paragraph 2 of the final Office action regarding claims 38 and 39, applicants have withdrawn these claims from consideration in order to narrow the issues for appeal.

Applicants presume that the statement at paragraph 14 of the final Office action that applicants prior remarks with regard to form and claims 38-39 were considered but deemed moot or not persuasive applies solely to the applicants position that these claims read on the elected species and are in no way directed to the patentability of these claims as was also asserted by applicants. To extent this presumption is incorrect, the undersigned respectfully requestes a phone call from the Examiner.

II. Response to Objection to Drawings

Figures 2 and 3 have been amended in response to the objections raised in paragraphs 5 and 7, respectively, of the Office action.

Figures 8, 9a and 9b have been added herein to show certain features recited in the claims as required in paragraph 6 of the Office action. More particularly, Fig. 8 has been

added to illustrate one of the loop fasteners 84, 85 as comprising an oriented nonwoven loop material secured to a substrate. Support for the added drawing can be found at least at page 23, lines 23-27 and in the claims of the application as originally filed.

Figure 9a has been added to show the general orientation of the constituent fibers of the nonwoven web prior to extension thereof to orient the fibers. Figure 9b has been added to show the general orientation of the constituent fibers of the nonwoven web after extension thereof. As can be seen, upon extension of the web more of the constituent fibers become oriented in the general direction of extension than prior to extension of the web to thereby define the oriented web. Support for adding Figs. 9a and 9b can be found at least at page 9, lines 16-18; page 27, line 8 to page 28, line 20; and the claims of the application as originally filed.

Figures 6 and 7 are amended to replace the text references to numerical references.

The amendments made to Figs. 2 and 3 and the addition of Figs. 8, 9a and 9b are submitted to place the drawings in proper form for allowance. The oriented nonwoven loop material and substrate as recited in the claims are now shown in the drawings.

III. Response to Objections to the Specification

In response to paragraph 7 of the Office action, Figure 3 is amended to delete reference numeral 78.

With respect to the Office's position regarding the term "oriented material," it is understood by those skilled in the art that a nonwoven web constructed in the manner described in

the present application has a random fiber orientation upon initial formation (e.g., in the relaxed or unextended configuration of the web). Thus, some of the fibers will already be aligned in the direction in which the web is to be drawn, and other fibers will be aligned perpendicular to (both laterally and vertically) the direction of draw. Many of the fibers will extend in direction including in part the direction in which the web is to be drawn.

Thus, upon drawing of the web to extend the web in the direction of draw, fibers which already extend in part in the direction of draw will become more oriented in the direction of draw. However, it is readily understood that fibers that start out perpendicular to the direction of draw (or close to perpendicular thereto) will not extend parallel to the direction of draw. In fact, some will not be reoriented at all upon extension of the web. Thus, the term oriented material as used in the present application does not mean that all of the fibers are oriented in the direction of draw. Rather, it means that the material has been drawn (e.g., extended) in such a manner that more fibers than were previously oriented in the direction of draw become oriented in the direction of draw.

Support for the above is provided in the specification at page 28, lines 21-23 wherein U.S. Patent No. 4,965,122 is incorporated by reference. The incorporated reference discloses a suitable nonwoven web and illustrates the web at Fig. 6 thereof prior to extension and at Fig. 5 thereof following extension wherein more fibers (but far less than all of the fibers) have become oriented in the direction of draw. Nothing the application or claims requires that all of the fibers of the web become oriented in the direction of draw.

At page 27, lines 11-13, the present application also notes that fibers become oriented more in the machine direction (direction of draw) than in the cross-machine direction, not that the fibers are expressly parallel with the machine direction. Thus, the web is oriented as long as it is extended from its initial configuration and upon extension of the web the fibers become more oriented in the direction of draw than when the web is unextended.

IV. Response to Rejection of Claims Under 35 U.S.C §112

The rejection of claims 1, 3, 6-7 and 9-10 are submitted to be moot in view of the cancellation herein of claims 1, 6-7 and 10. Moreover, claim 3 has been amended herein to provide proper antecedent basis to the term "machine-direction" and to clarify that the recited machine direction is that of the oriented nonwoven loop material.

The claims as now presented are therefore submitted to satisfy all of the requirements of 35 USC §112.

V. Response to Rejection of Claims Under 35 USC §102/103

Claim 28

Claim 28 is directed to a mechanical fastening system for an article in which one of the fastening components of the fastening system comprises an oriented nonwoven loop material. The oriented nonwoven loop material comprises a nonwoven web of fibers which is extensible and is in an extended configuration on a substrate to which the nonwoven web is secured, such as the article itself or a substrate that is formed separate from and can be subsequently secured to the article. As a result of

extending the extensible nonwoven web of fibers, more fibers of the web become oriented generally in the direction in which the web is extended.

More particularly, claim 28 recites a mechanical fastening system for an article wherein the mechanical fastening system comprises:

a first fastening component comprising an oriented nonwoven loop material secured to a substrate, the oriented nonwoven loop material comprising a nonwoven web of fibers, said web being extensible from a relaxed configuration to an extended configuration wherein in the extended configuration a greater number of fibers of the nonwoven web are oriented in the direction in which the web is extended than in the relaxed configuration of the web, the web being in its extended configuration on the substrate; and

a second fastening component comprising a hook material, the oriented nonwoven loop material of the first fastening component being adapted for releasable connection with the hook material of the second fastening component.

Claim 28 is submitted to be patentable over the references of record, and in particular EP 0 289 198 (Noel et al.) and WO 97/25893 (Weirich et al.), in that whether considered alone or in combination the references fail to show or suggest a mechanical fastening system comprising an oriented nonwoven loop material on a substrate wherein the oriented nonwoven loop material comprises an extensible nonwoven web of fibers which is *in an extended configuration on a substrate* and wherein in the extended configuration a greater number of fibers of the nonwoven web are oriented generally in the direction in which the web is extended.

Noel et al. disclose a loop fastening material comprising a backing (22) of orientable material (defined by Noel et al. as a web that has a dimensionally unstable state; see column 4, lines 6-14), preferably a heat shrinking material, and a multiplicity of fibrous elements (28) extending outward from the backing (22). The fibrous elements (28) are intermittently secured to the backing (22) at spaced, fixed regions (32) along the length of each filament while the orientable backing material is in an unstable state. Upon movement back to the stable state of the backing material, the fibrous material is shirred (i.e., gathered) to form loops which can be connected to a hook material (52). In one embodiment, the backing material is a heat shrinkable material and in another embodiment the backing material is an elastomeric material.

Noel et al. lack any disclosure that the fibrous elements (28) are extensible, and even moreso fail to disclose that the fibrous elements are in an extended configuration on the orientable backing material. Rather, the backing material is an unstable (e.g., shrinkable or stretched) condition when the fibrous elements are secured to the backing. As a result, shirring of the fibrous elements occurs when the backing material moves to its stable condition. In contrast, the nonwoven web of fibers of the loop material of applicants' first fastening component as recited in claim 28 is extensible and is in a drawn, or extended configuration (e.g., to define the oriented nonwoven loop material) on the substrate.

In support of its position, the Office cites (among other passages) column 6, lines 28-36 at which Noel et al. disclose that the filaments (30) are preferably positioned on the backing (22) while the orientable material of the backing is in

its heat unstable state "and while the filaments 30 are in an untensioned condition . . ." Similar disclosure can be found at column 9, lines 10-17. In particular, the Office takes the position that the term tensioned as used by Noel et al. implicitly means that the filaments 30 are in an extended condition. Applicants respectfully disagree.

The dictionary definition of the term tension as set forth in Random House Webster's College Dictionary, Random House, Inc., 1995, is to stretch or to strain. The term strain means to draw tight; make taut. Thus, while it is possible that the filaments 30 of Noel et al. may be stretched, it is equally possible that Noel et al. teaches that the filaments are simply made taut but not stretched. Indeed, Noel et al. do not teach that the filaments are extensible under tension. Consequently, Noel et al. fail to teach, explicitly or inherently, that the filaments are in an extended condition on the backing material.

Weirich et al. disclose a female component of a refastenable fastening device. The female component comprises an elastomeric adhesive backing (34) and a multiplicity of fibrous elements (30) extending from the backing. Weirich et al. disclose that the multiplicity of fibrous elements (30) may be a nonwoven web. According to Weirich et al., the female component is formed by securing the nonwoven web (30) to the elastomeric backing (34) while the backing is elongated so that when the backing is allowed to return to a relaxed state the nonwoven web is shirred (i.e., gathered). Nowhere do Weirich et al. disclose or even suggest that the nonwoven web (30) is extensible, nor do Weirich et al. teach that the nonwoven web is in an extended configuration on the backing (34). Rather, as disclosed at page 8, lines 17-19 of Weirich et al., the

filaments (36) of the nonwoven web (30) are in an untensioned state when they are joined to the elongated backing (34).

Thus, Weirich et al. lacks that same teachings as Noel et al. In fact, the passages of Weirich et al. relied upon by the Office in support of its position (e.g., page 15, lines 13 et seq.) are substantially the same as that of Noel et al. That is, Weirich et al. teach that the filaments (36) could conceivably be in a tensioned condition. However, as discussed above, the term tensioned does not explicitly mean that the filaments are actually extended. Moreover, it is not inherent that the filaments are extended simply because they could conceivably be tensioned. For example, they may only be pulled taut and may even be inextensible.

Thus, as was the case with Noel et al, Weirich et al. fail to show or suggest a nonwoven loop material on a substrate wherein the nonwoven loop material comprises a nonwoven web that is extensible and is in an extended configuration on the substrate as recited in new claim 28. Consequently, neither Noel et al. nor Weirich et al. can anticipate claim 28.

The other references of record also fail to show or suggest the combination of features recited in claim 28.

For these reasons, claim 28 is submitted to be patentable over Noel et al., Weirich et al. and the other references of record.

Claims 3, 9 and 30-32 depend directly or indirectly from claim 28 and are submitted to be patentable over the references of record for the same reasons as claim 28.

Claim 33

Claim 33 is directed to an absorbent article for personal wear comprising:

a liquid permeable inner layer for contact with the wearer's skin, an outer layer in superposed relationship with the inner layer, and an absorbent layer disposed between the inner layer and the outer layer, the article having a first end region and a second end region; and

a mechanical fastening system comprising at least one first fastening component disposed generally at the first end region of the article and at least one second fastening component disposed generally at the second end region of said article and adapted for releasable connection with the at least one first fastening component to secure the article on a wearer of said article, the at least one first fastening component comprising an oriented nonwoven loop material secured to a substrate, the oriented nonwoven loop material comprising a nonwoven web of fibers, said web being extensible from a relaxed configuration to an extended configuration wherein in the extended configuration a greater number of fibers of the nonwoven web are oriented in the direction in which the web is extended than in the relaxed configuration of the web, *said web being in its extended configuration on the substrate*, the at least one second fastening component comprising a hook material, the oriented nonwoven loop material of the at least one first fastening component being adapted for releasable connection with the hook material of the at least one second fastening component.

In essence, new claim 33 is directed to an absorbent article incorporating the mechanical fastening system recited

in claim 28 and discussed previously herein. Claim 33 is therefore submitted to patentable over Noel et al., Weirich et al. and the other references of record for the substantially the same reasons as claim 28.

Claims 34-37 depend directly from claim 33 and are submitted to be patentable over the references of record for the same reasons as claim 33.

VI. Discussion of New Claims

Claim 40

New claim 40 is directed to a mechanical fastening system for an article, wherein the fastening system comprises:

a first fastening component comprising an oriented nonwoven loop material secured to a substrate, the oriented nonwoven loop material comprising a nonwoven web of fibers, said web being extensible from a relaxed configuration to an extended configuration wherein in the extended configuration a greater number of fibers of the nonwoven web are oriented in the direction in which the web is extended than in the relaxed configuration of the web, the web being in its extended configuration on the substrate and being generally free from substantial necking and gathering on the substrate in a direction perpendicular to the direction in which the web is extended; and

a second fastening component comprising a hook material, the oriented nonwoven loop material of the first fastening component being adapted for releasable connection with the hook material of the second fastening component.

Claim 40 corresponds to canceled claim 29 written in independent form for the purpose of placing the application in better form for appeal. The phrase "on the substrate" is added to clarify that the oriented nonwoven loop material is substantially free from necking and gathering after securement to the substrate, i.e., in the final form in which the first fastening component is to be used.

New claim 40 is submitted to be unanticipated by and patentable over the references of record, and in particular Noel et al. and Weirich et al. in that whether considered alone or in combination the references fail to show or suggest the combination of features of claim 40 including the oriented nonwoven loop material being substantially free from necking and gathering on the substrate in a direction perpendicular to the direction in which the web is extended.


Noel et al. and Weirich et al. clearly teach forming a fastening component so that the loop fastening material is shirred, i.e., gathered. There is no disclosure or suggestion found anywhere in either of these references that the loop fastening material is anything other than shirred in the as used embodiment of the fastening component.

For at least these reasons, in addition to those discussed above in connection with claim 1, new claim 40 is submitted to be patentable over the references of record.

CONCLUSION

In view of the above, applicants respectfully request favorable consideration and allowance of claims 3, 9, 28-37 and 40 as now presented.

Respectfully submitted,



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